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Indian Standard

RECOMMENDATIONS ON SHAPE AND DIMENSIONS OF SINGLE BOX PICKER FOR AUTOMATIC LOOMS

UDC 677.054.73 : 389.63



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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Price Rs 5.00

January 1978

Indian Standard

RECOMMENDATIONS ON SHAPE AND DIMENSIONS OF SINGLE BOX PICKER FOR AUTOMATIC LOOMS

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0. F O R E W O R D

0.1 This Indian Standard was adopted by the Indian Standards Institution on 12 September 1977, after the draft finalized by the Textile Mill Leather Articles Sectional Committee had been approved by the Textile Division Council.

0.2 This standard is based on DIS 227 Single box pickers for automatic looms, issued by the International Organization for Standardization (ISO).

0.3 This standard forms a part of a series of Indian Standards on pickers of various shapes and dimensions corresponding to different types of looms. Other standards published so far in the series are given on page 8.

0.4 To familiarize the industry with International System of Units (SI Units), the basic SI Units as well as the recommended SI Units for use in the textile industry are given in Appendix A.

0.4.1 Standard Weights and Measures Act 1976 also stipulates use of SI Units.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes requirements for shape and dimensions of single box pickers to be used on (underpick) automatic looms.

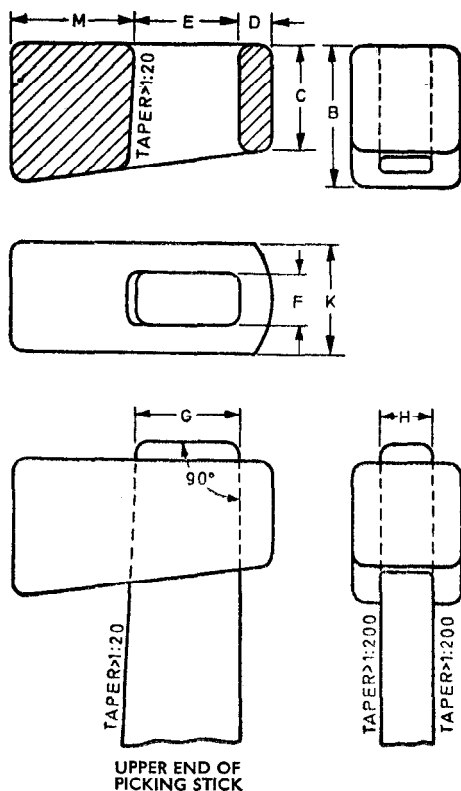
2. DIMENSIONS

2.1 The critical dimensions of single box automatic loom picker are given in Fig. 1.

*Rules for rounding off numerical values (*revised*).

3. OTHER REQUIREMENTS

3.1 In respect of other requirements the single box picker shall conform to IS : 8545-1977*.



	B	C	D	G	H	K	M
Type 1	35	26	6-9	26	13	27	29-31
Type 2	35	26	6-9	26	16	27	29-31
Type 3	29	21	6-9	26	16	27	29-31

NOTE 1 — Slot dimensions *E* and *F* shall be so chosen, depending upon the material of the picker, so that it fits tightly on the picking sticks, when mounted.

NOTE 2 — The shuttle striking point may be indicated by a hollow 5 mm deep and 8 to 11 mm diameter on the surface.

All dimensions in millimetres.

FIG. 1 CRITICAL DIMENSIONS OF SINGLE BOX PICKER

*Specification for loom pickers.

APPENDIX A

(Clause 0.4)

SI UNITS

TABLE 1 INTERNATIONAL SYSTEM OF UNITS

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	CONVERSION
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

TABLE 2 RECOMMENDED SI UNITS FOR TEXTILES

SL No.	CHARACTER- ISTIC	SI UNITS		APPLICATION
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
1. Length		Millimetre	mm	Fibre
		Millimetre, centimetre	mm, cm	Samples and test specimens (as appropriate)
		Metre	m	Yarns, ropes and cordages, fabrics
2. Width		Millimetre	mm	Narrow fabrics
		Centimetre	cm	Other fabrics
		Millimetre, centimetre	mm, cm	Samples and test specimen (as appropriate)
		Centimetre, metre	cm, m	Carpets, druggets, durries (as appropriate)
3. Thickness		Micrometre (micron)	μm	Delicate fabrics
		Millimetre	mm	Other fabrics, carpets, felts
4. Linear density		Tex	tex	Yarns
		Millitex	mtex	Fibres
		Decitex	dtex	Filament and filament yarns
		Kilotex	ktex	Slivers, ropes and cordages
5. Diameter		Micrometre (micron)	μm	Fibres
		Millimetre	mm	Yarns, ropes, cordages
6. Circumference		Millimetre	mm	Ropes, cordages
7. Threads in cloth:				Woven fabrics (as appropriate)
a) Length		Number per centimetre	ends/cm	
		Number per decimetre	ends/dm	
b) Width		Number per centimetre	picks/cm	
		Number per decimetre	picks/dm	
8. Warp threads in loom		Number per centimetre	ends/cm	Reeds
9. Stitches in cloth:				Knitted fabrics (as appropriate)
a) Length		Number per centimetre	courses/cm	
		Number per decimetre	courses/dm	
b) Width		Number per centimetre	wales/cm	
		Number per decimetre	wales/dm	

(Continued)

TABLE 2 RECOMMENDED SI UNITS FOR TEXTILES — *Contd*

SL No.	CHARACTER-ISTIC	SI UNITS		APPLICATION
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
10. Stitch length		Millimetre	mm	Knitted fabrics Made-up fabrics
11. Mass per unit area		Grams per square metre	g/m ²	Fabrics
12. Mass per unit length		Grams per metre	g/m	Fabrics
13. Twist		Turns per centimetre	turns/cm	Yarns, ropes (as appropriate)
		Turns per metre	turns/m	
14. Test or gauge length		Millimetre, centimetre	mm, cm	Fibres, yarns and fabric specimens (as appropriate)
15. Breaking load		Millinewton	mN	Fibres, delicate yarns (skeins or individual)
		Newton	N	
16. Breaking length		Kilometre	km	Yarns
17. Tenacity		Millinewton per tex	mN/tex	Fibres, yarns (individual or skeins)
18. Twist factor or twist multiplier		Turns per centimetre × square root of tex	turns/cm × $\sqrt{\text{tex}}$	Yarns (as appropriate)
		Turns per metre × square root of tex	turns/m × $\sqrt{\text{tex}}$	
19. Bursting strength		Newton per square centimetre	N/cm ²	Fabrics
20. Tear strength		Millinewton Newton	mN N	Fabrics (as appropriate)
21. Pile height		Millimetre	mm	Carpets
22. Pile density		Mass of pile yarn in grams per square metre per millimetre pile height	g/m ² /mm pile height	Pile carpet
23. Elastic modulus		Millinewton per tex per unit deformation	mN/tex/unit deformation	Fibres, yarns, strands

INDIAN STANDARDS
ON
TEXTILE MILL LEATHER ARTICLES

IS:

- 1225-1972 Leather picking band for looms (*first revision*)
- 1619-1976 Buffer band for cop-changing automatic looms
- 1737-1976 Spring buffers for cotton looms (*first revision*)
- 1903-1977 Recommendations on shape and dimensions of pickers for jute looms (*first revision*)
- 1906-1977 Recommendations on shape and dimensions of 4 B pickers (*second revision*)
- 3446-1977 Leather aprons for drafting systems (*first revision*)
- 6300-1971 Picker savers (formaldehyde tanned leather)
- 8545-1977 Loom pickers
- 8546-1977 Requirements for leather or raw hide exclusively used in the manufacture of loom pickers